ESO 156

Preliminary Draft

OHIO GREENHOUSE TOMATO SUMMARY

1971 CROP YEAR

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Ohio Greenhouse Tomato Summary - 1971 Crop Year

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Introduction

Record summaries for nine Ohio greenhouse tomato growers provides an opportunity for all greenhouse tomato growers to improve the business management of their operation. Good records take time, even the ones required for income tax purposes. But when records are used for management purposes they can provide a very high rate of return for your time.

What should a business record analysis system do to help improve your business? It can clarify the return you are getting for your labor and capital investment. Efficiency factors serve as indicators of the strengths and weaknesses of your business. After two or more years have been analyzed, you can tell if you are correcting the weak points in the business. Comparison with summaries of other businesses can help you to see how your costs compare with other producers. If your costs are high, is it a result of overcommitment to new technology, poor management, inefficient labor, or what? Being able to compare your situation to others helps identify the areas where you need to concentrate your management abilities, so as improve or maintain the desired level of income.

The Ohio Farm Business Analysis takes your records and summarizes them in two ways. First, how did your firm do overall? Is the firm making money, If not, does the problem appear to be related to volume or to profit margin? Second, how did individual enterprises within the firm do? How much difference is the returns on the spring vs. fall tomatoes? What is my cost of production for spring tomatoes? Looking only at total firm

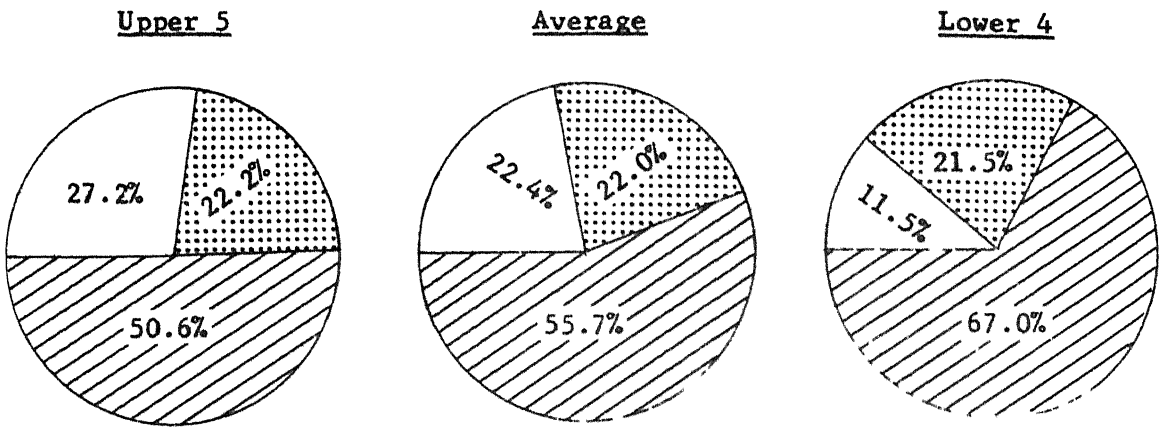
figures may obscure some of the key profit or loss figures. Similarly, looking only at per acre figures, obscures the total package of investments, costs, and profits necessary for a viable operation.

Total Greenhouse Tomato Summary

Economic theory (and common sense) dictate that for any business over time total receipts and total expenses must be equal. The business analysis is built around this approach. Gross income measures all sources of income for the year: cash receipts, inventory change, and capital gains. This is the total income the firm has available to it over the period. What happens to gross income? Most of it is required to pay the expenses of the operation. Overhead costs are those that must be paid even if no production takes place; depreciation, interest, repairs, taxes and insurance. Variable costs, such as fuel, supplies and labor are necessary to produce tomatoes, but could be eliminated if no production took place. Any income remaining after these costs are met is the return to the operator for his labor and management. A return for equity capital is included in overhead costs so this remainder is strictly labor and management income.

How did the greenhouse tomato growers do in 1971? (Figure 1 and Table 1). Firms were summarized and then ranked by return to labor and management income per hour. This tends to offset some of the profitability associated with size. However, the five firms with the highest labor and management income per hour averaged $167,629 in gross sales. The lower four farms averaged $93,728. Overhead costs required about 22 percent of gross sales for each group. However, variable costs of production required only 50 percent of gross sales for the upper five firms compared to 67 percent of gross sales for the lower four firms. This higher production cost meant

Figure 1 - ALLOCATION OF GROSS INCOME, OHIO GREENHOUSE TOMATO GROWERS, 1971



	Upper 5	Average	Lower 4
Gross Income	$167,629	$134,784	$93,728

Labor & Management Income

Variable Costs

Overhead Costs

Table 1: TOTAL FIRM FINANCIAL SUMMARY

NINE OHIO GREENHOUSE TOMATO OPERATIONS, 1971

	Upper 5	Average	Lower 4	My Greenhouse
Income				
Cash Receipts	$167,244	$134,470	$93,501	
Gross Income	167,629	134,784	93,728	
Expenses				
Cash Expenses	103,650	90,831	74,807	
Depreciation	14,924	11,120	6,365	
Interest Not Charged	3,487	2,728	1,779	
Unpaid Operator and Family Labor	25,536	20,858	15,010	
Total Expense	147,596	125,537	97,961	
Management Income and Profit				
Total	20,033	9,249	-4,233	
As a Percent of Gross Income	12.0%	6.9%	-4.5%	
Unpaid Operator and Family Labor				
Total	25,536	20,858	15,010	
As a Percent of Gross Income	15.2%	15.5%	16.0%	
Overhead Costs				
Total	37,236	29,653	20,172	
As a Percent of Gross Income	22.2%	22.0%	21.5%	
Variable Costs				
Total	84,824	75,026	62,779	
As a Percent of Gross Income	50.6%	55.7%	67.0%	
Net Cash Income	63,594	43,639	18,694	
Net Firm Income	49,055	32,834	12,557	
Investment				
Total	161,660	124,707	78,515	
Return to Investment	29,732	16,731	479	
Profit Margin (Return as a % of gross)	17.7%	12.4%	0.5%	
Turnover (Return per $1 invested)	1.04	1.08	1.19	
Return On Investment (Return as a % of investment)	18.4%	13.4%	0.6%	
Total Unpaid Labor & Management Income				
Total	45,569	30,106	10,777	
Hour	9.60	6.49	2.77	

that these firms netted only $10,777 or 11.5 percent of gross sales, return for their labor and management, while the upper five firms netted $45,569 or 27.2 percent of gross sales, for labor and management. On hours worked by the operator and other unpaid family members the upper five averaged $9.60 return per hour, while the lower four only averaged $2.77 per hour.

Also of concern here is to compare the Return for Labor and Management Income with the amount operators felt they and other unpaid family members should receive for their labor. The item called Unpaid Operator and Family Labor is what operators felt should be earned for their labor. Total Unpaid Labor and Management Income shows the amount actually earned for labor and management. The upper five firms valued unpaid labor at $25,536, but earned $45,569. Thus, over $20,000 additional income was generated for their management. On the other hand, the lower five firms valued their unpaid labor at $15,010, but their total labor and management income was only $10,777. Thus their businesses were not profitable enough to even pay a competitive wage to unpaid family labor. However, the firms did show some return to unpaid labor.

Thus far we have concentrated on labor income, but firms are also interested in their return on investment. Net firm income summarizes the returns to all unpaid factors of production (Figure 2). This shows the long run profitability of the firm since we have deducted not only cash costs, but also non-cash costs such as depreciation. If this amount is not positive over several years, the firm ceases to exist.

Firms organized as corporations pay all employees and officers a salary so net income is all treated as return to investment. Our analysis shows net firm income and the task is estimate return to labor and to

Figure 2 - RELATIONSHIP OF NET FIRM INCOME, LABOR AND MANAGEMENT INCOME AND RETURN TO INVESTMENT

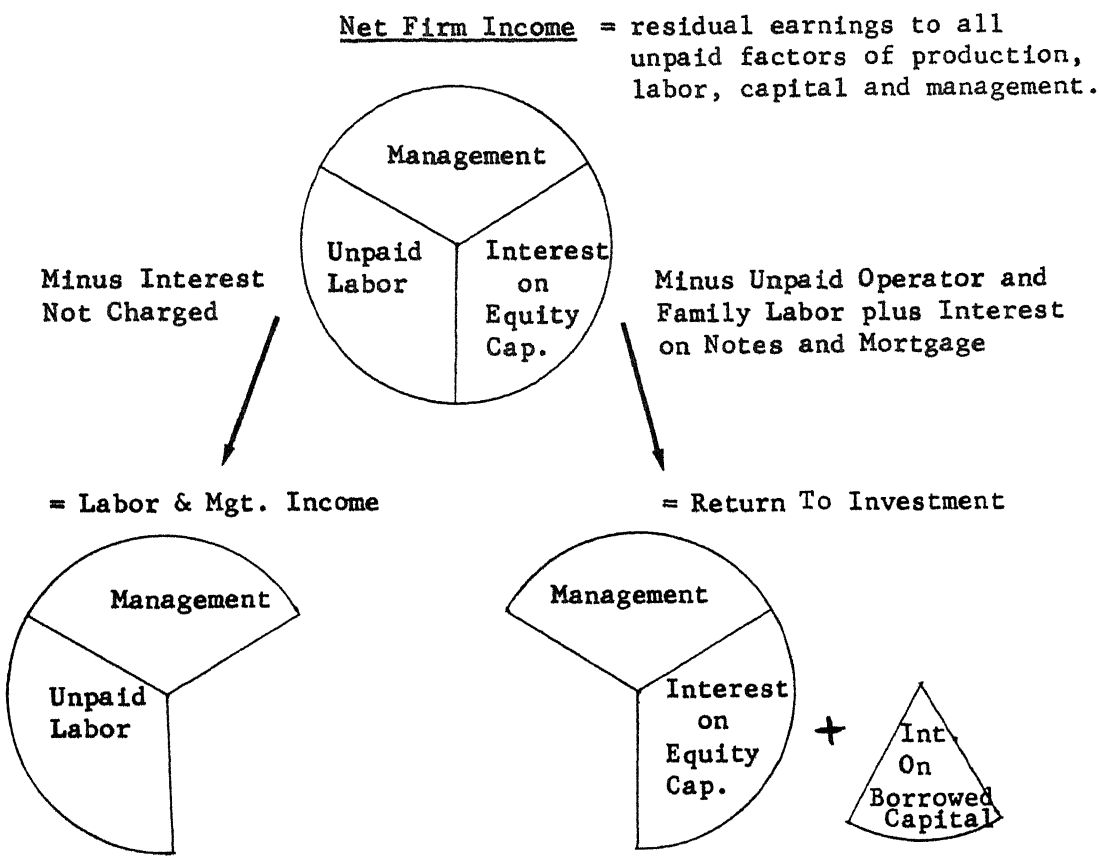


Table 2: DETAILED RECEIPTS, EXPENSES, INVENTORY CHANGE, DEPRECIATION AND INVESTMENT FOR NINE OHIO GREENHOUSE TOMATO OPERATIONS, 1971

	Upper 5	Average	Lower 4	My Greenhouse
ash Receipts				
Spring Tomatoes	$131,373	$102,296	$65,950	
Fall Tomatoes	34,751	31,551	27,551	
Interest Income	308	171	0	
Miscellaneous Receipts	813	452	0	
Total Cash Receipts	167,244	134,470	93,501	
ash Expenses				
Hired Labor	$ 34,469	$ 30,622	$25,814	
Greenhouse Supplies	9,994	8,812	7,334	
Machinery Repairs	1,013	828	596	
Bldg., Fence, Tile, Etc. Reparis	5,193	4,582	3,818	
Utilities	4,098	3,089	1,828	
Coal	1,353	4,995	9,546	
Miscellaneous Expenses	3,090	2,330	1,381	
Seeds and Plants	285	699	1,216	
Fertilizer and Lime, insecticides, leaf test, etc.	2,700	1,896	890	
Auto & Truck Expense	1,901	4,576	7,921	
Interest on Notes and Mortgage	6,213	4,755	2,932	
Director's Fees	2,340	1,300	0	
Gas	23,580	15,879	6,253	
Taxes	4,519	3,785	2,869	
Cash Rent	240	133	0	
Insurance	2,661	2,549	2,409	
Total Cash Expenses	103,650	90,831	74,807	
et Inventory Change	320	279	227	
epreciation				
Buildings, Fence, Etc.	11,464	7,768	3,148	
Machinery and Equipment	3,460	3,352	3,218	
Total Depreciation	14,924	11,120	6,365	
pital Investment				
Oil	160	498	937	
Coal	100	56	0	
Fertilizer and Supplies	460	450	436	
Machinery and Equipment	15,062	13,593	11,757	
Buildings, Fence, Tile, Greenhouse	121,031	89,388	49,835	
Land (Current Ag. Value)	24,860	20,722	15,550	
Total Capital Investment	161,660	124,707	78,515	

capital. Since we cannot clearly separate out these returns we set up proxies for one to estimate the other. To estimate labor income, we subtract Interest Not Charged, which is based on a six percent return on estimated equity capital.

The difference between this amount (Interest Not Charged) and Net Firm Income is Unpaid Labor and Management Income.

To estimate return to investment we begin by deducting the charge for Unpaid Operator and Family Labor. Then since we are looking at the return for the total investment, we add Interest Paid On Notes and Mortgages (shown in Table 2). Thus Return to Investment is the return to management and capital.

Return to Investment can also be related to gross income and total investment to further analyze your business. The percent Return to Investment is of Gross Income is called Profit Margin (Table 3).

Table 3: PROFIT MARGIN, TURNOVER, AND RETURN ON INVESTMENT FOR 9 OHIO GREENHOUSE TOMATO GROWERS, 1971

Item	Unit	9 Firms		
		Upper 5	Average	Lower 4
Profit Margin	Percent	17.7	12.4	0.5
Turnover	Gross Per $1 Invested	1.04	1.08	1.19
Return On Investment	Percent	18.4	13.4	0.6

If a firm is to succeed, it must have a profit on each unit it sells. The upper five firms averaged 17.7 percent return to investment or 17.7¢ profit out of each $1.00 of sales. However, the lower five firms barely broke even, with one-half¢ profit on each dollar sold.

Likewise firms must generate volume relative to their investment. Turnover relates gross sales per $1.00 involved. Turnover varies from

industry to industry and from year to year within the same industry. All firms in the summary showed high turnover.

The product of Profit Margin and Turnover is Return on Investment (R.O.I.) The total Return to Investment divided by the dollar investment gives R.O.I. The upper five firms averaged 18.8 percent R.O.I. while the lower four firms averaged only 0.6 percent. R.O.I. equals Profit Margin times Turnover and thus is affected by both. It is evident that low Profit Margins are what caused the lower four firms poor R.O.I.

In looking at these nine greenhouse tomato operations, major differences in the financial analysis are the high proportion of variable costs and low profit margins shown by the lower four firms. These may be due to high cost per unit of production, low yield, or low sales price. Other parts of the analysis can help to isolate this for individual farms.

Labor Use

Basic data on labor use by operator and hired labor and its value is shown in Table 4. The lower four firms reported more hours of labor use per acre, but this reflects the fact that three of them did their own packing.

Enterprise Analysis

As with most other business, the greenhouse tomato operation can be broken down into enterprises. The obvious break is to separate out the spring and fall tomato crops from the total crops. In addition it is helpful to be able to compare figures on a per unit basis. Therefore the following sections provide a more detailed look at the business by: 1) Per one-tenth acre produced, and 2) Per 1,000 baskets produced.

Table 4: AMOUNT AND VALUE OF LABOR USED ON NINE OHIO GREENHOUSE TOMATO OPERATIONS, 1971

Labor Efficiency	Upper 5	Average	Lower 4	My Greenhouse
Reported Labor Used				
Operators Labor Used				
First Operator				
Hours	3,023	3,155	3,320	_____
Value/Hr.	$6.05	$5.14	$4.00	_____
Second Operator				
Hours	1,723	1,213	575	_____
Value/Hr.	$3.05	$3.09	$3.17	_____
Hired Labor				
Hours	14,453	13,001	11,185	_____
Value/Hr.	$2.38	$2.36	$2.31	_____
Number of Man Equivalent Hours Used	19,683	17,637	15,081	_____
Number of PMWU Used (10 hour days)	1,968	1,764	1,508	_____
Number of Man-Year Equivalents Used (3,000 hours)	6.56	5.88	5.03	_____
Value of Operators Labor Used	25,536	20,858	15,010	_____
Value of Hired Labor Used	34,469	30,622	25,814	_____
Value of Total Labor	60,005	51,480	40,824	_____
Value of Labor Per Man Hour Equivalent	3.11	2.92	2.71	_____
Value of Labor Per PMWU	31.15	29.19	27.07	_____
Value of Labor Per Man-Year Equivalent	9,354	8,755	8,116	_____
Hours of Labor Used Per Acre*	7,290	7,350	7,530	_____

* Three of the lower four firms did their own packing.

The basic terms and interpretation of these terms is the same as used in the total firm summary. Major differences are that these are put on a comparable production unit, and costs and returns have been allocated to spring or fall crops, where applicable.

Enterprise Analysis Per One-tenth Acre of Tomatoes

Figure 3 gives an overview of the breakdown of costs and residual for unpaid labor per one-tenth acre for 1971. Tables 5, 6 and 7 contain cost and return information per one-tenth acre of tomatoes grown, for both crops, spring crop only, and fall crop only. The upper five firms received $1,724 Net Firm Income per one-tenth acre compared to $593 for the lower four firms. Their costs per one-tenth acre were higher, but the higher production per one-tenth acre more than offset it.

Looking at the spring and fall crop summaries, it can be seen that the major difference resulted from the spring crop. There was little difference in returns per one-tenth acre for the fall crop between the two groups. While the fall crop does not produce large profits, it did cover all variable and overhead costs plus yield a $1.75 to $2.62 per hour return to unpaid labor and management.

Enterprise Analysis Per 1,000 Baskets Produced

Tables 8, 9, and 10 present the same data for all crops, spring crop, and fall crop, but costs and returns are reported per 1,000 baskets produced. This provides a useful way to look at costs and returns, since sales are in units of baskets. It must be recalled, however, that expense and income resulting from the packing house operation is not included in these figures.

Figure 3 - ANNUAL GROSS INCOME AND COST PER 1/10 ACRE,
9 GREENHOUSE TOMATO OPERATIONS, OHIO, 1971

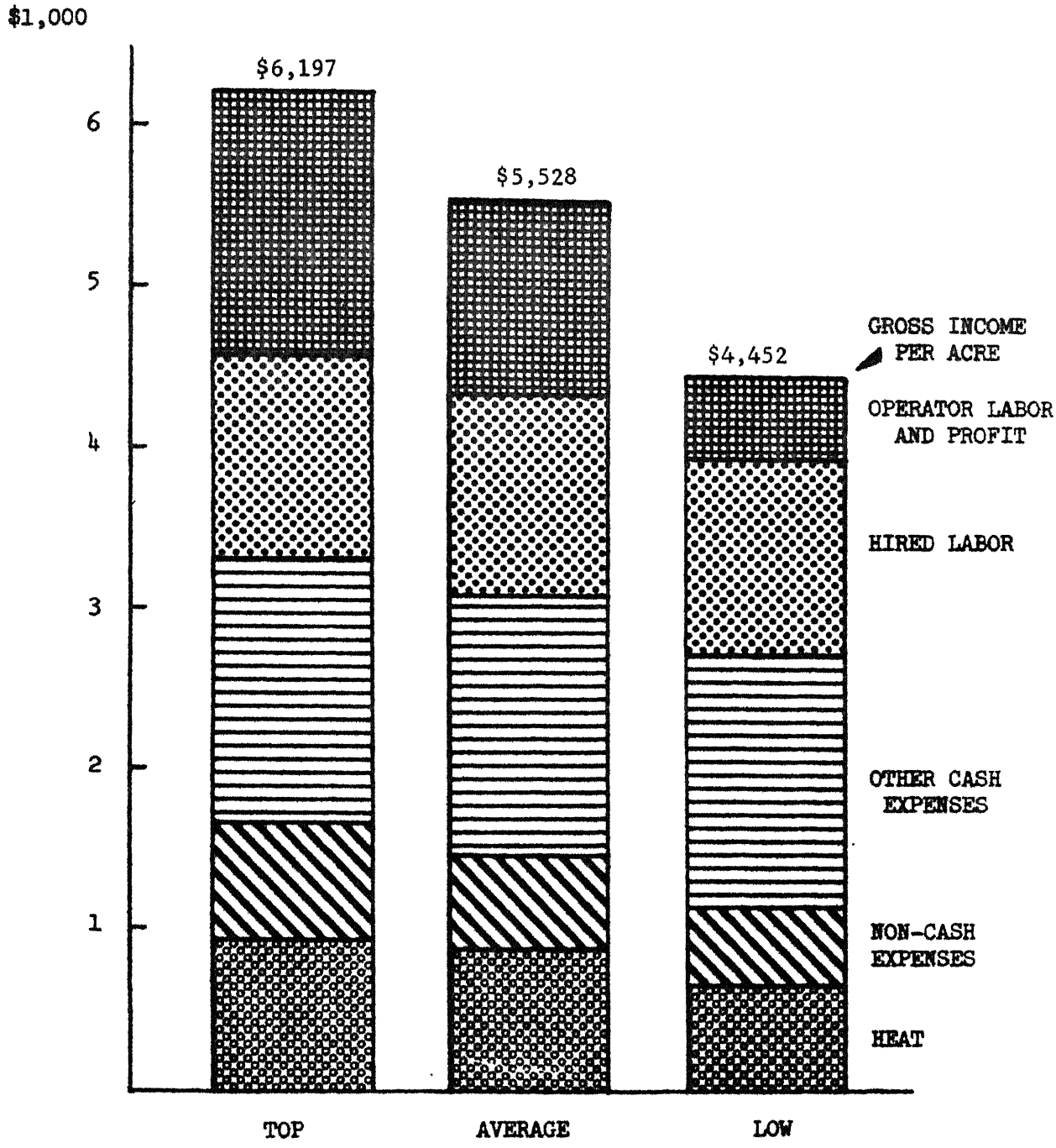


Table 5: FINANCIAL ANALYSIS PER 1/10 ACRE OF GREENHOUSE TOMATOES, OHIO, 1971

	Upper 5	Average	Lower 4	My Greenhouse
General Information				
Number of Acres	2.7	2.4	2.1	
Value Per Basket Sold*	$2.68	$2.63	$2.53	
Cost Per Basket Sold*	$2.09	$2.13	$2.26	
Total Hours of Labor Per Acre	7,290	7,250	7,180	
Information Per 1/10th Acre	Per 1/10th Acre			
Baskets Produced	2,716	2,376	1,831	
VALUE OF PRODUCTION	$6,197	$5,528	$4,452	
Cash Expenses				
Farm Supplies	$ 361	$ 356	$ 349	
Machine Repairs	30	29	28	
Build, Fence, Etc.	201	194	182	
Hired Labor	1,265	1,253	1,230	
Utilities	160	132	87	
Coal	45	201	449	
Misc. Expense	129	106	66	
Seeds, Plants, Fertilizer, Etc.	95	97	100	
Truck & Auto Expense	80	194	377	
Interest on Notes	276	224	140	
Director's Fees	57	35	0	
Oil & Gas	906	673	298	
Taxes	172	160	137	
Insurance	98	106	115	
Total Cash Expenses	3,874	3,752	3,556	
Non-Cash Expenses				
Depreciation				
Bldg., Fence, Tile	$ 414	$ 313	$ 150	
Machinery & Equipment	184	172	153	
Total Depreciation	598	485	303	
Unpaid Opr. & Fam. Labor	97	87	71	
Interest Not Charged	117	105	87	
Total Non-Cash Expenses	1,686	1,460	1,101	
TOTAL EXPENSES	5,559	5,214	4,657	
MANAGEMENT INCOME AND PROFIT	638	314	-205	
NET FIRM INCOME	1,724	1,291	593	
VALUE OF PRODUCTION-CASH EXPENSES	2,322	1,775	896	
Total Investment	6,546	5,481	3,770	
Return to Investment	1,030	641	21	
Profit Margin	16.6%	11.6%	0.5%	
Turnover	.94	1.01	1.18	
Return on Investment	15.7%	11.7%	.6%	
TOTAL UNPAID LABOR AND MANAGEMENT INCOME	1,607	1,186	506	

* Includes labor and supplies for packing or estimated packing house charges. Estimated charges are not included in data below, however.

Table 6: FINANCIAL ANALYSIS PER 1/10 ACRE FOR SPRING CROP OF GREENHOUSE TOMATOES, OHIO, 1971

	Upper 5	Average	Lower 4	My Greenhouse
General Information				
Number of Acres	2.7	2.4	2.1	
Value Per Basket Sold*	$1.75	$2.69	$2.59	
Cost Per Basket Sold*	$2.35	$2.41	$2.64	
Information Per 1/10th Acre		Per 1/10th Acre		
Baskets Produced	2,101	1,778	1,261	
Hours of Labor Used	500	483	456	
Value of Labor Used	$1,528	$1,415	$1,234	
VALUE OF PRODUCTION	$4,931	$4,244	$3,141	
Cash Expenses				
Hired Labor	$ 862	$ 824	$ 762	
Farm Supplies	278	269	255	
Machine Repair	23	22	21	
Build, Fence, Etc.	153	141	121	
Utilities	123	98	58	
Coal	41	168	371	
Misc. Expense	100	80	46	
Seed, Plants & Fertilizer, etc.	71	68	62	
Truck & Auto Expense	62	137	256	
Interest on Notes	217	170	94	
Director's Fees	43	27	0	
Oil & Gas	703	528	246	
Taxes	133	119	96	
Insurance	75	78	79	
Total Cash Expenses	2,883	2,723	2,467	
Non-Cash Expenses				
Depreciation				
Bldg., Fence, Tile	$ 325	$ 240	$ 103	
Machinery & Equipment	141	126	105	
Total Depreciation	465	366	208	
Unpaid Opr. & Fam. Labor	666	592	472	
Interest Not Charged	88	78	62	
Total Non-Cash Expenses	1,219	1,036	742	
TOTAL EXPENSES	4,102	3,759	3,209	
MANAGEMENT INCOME AND PROFIT	829	485	-68	
NET FIRM INCOME	1,583	1,155	466	
VALUE OF PRODUCTION-CASH EXPENSES	2,047	1,520	674	
Total Investment	5,075	4,115	2,571	
Return to Investment	1,134	732	87	
Profit Margin	23.0%	17.0%	3.0%	
Turnover	.97	1.03	1.22	
Return on Investment	22.3%	17.8%	3.4%	
TOTAL UNPAID LABOR AND MANAGEMENT INCOME				
Total	1,495	1,077	404	
Per Hour	$11.79	$8.50	$3.21	

* Includes labor and supplies for packing or estimated packing house charges. Estimated charges are not included in data below, however.

Table 7: FINANCIAL ANALYSIS PER 1/10 ACRE FOR FALL CROP OF GREENHOUSE TOMATOES, OHIO, 1971

	Upper 5	Average	Lower 4	My Greenhouse
General Information				
Number of Acres	2.7	2.4	2.1	
Value Per Basket Sold*	$2.46	$2.45	$2.40	
Cost Per Basket Sold*	$2.77	$2.73	$2.64	
Information Per 1/10th Acre	Per 1/10th Acre			
Baskets Produced	614	598	570	
Hours of Labor Used	230	240	261	
Value of Labor Used	$ 708	$ 708	$ 707	
VALUE OF PRODUCTION	$1,266	$1,284	$1,312	
Cash Expenses				
Hired Labor	$ 404	$ 429	$ 468	
Farm Supplies	83	87	93	
Machine Repairs	7	7	8	
Build, Fence, Etc.	47	53	61	
Utilities	36	33	29	
Coal	5	33	78	
Misc. Expense	30	26	20	
Seeds, Plants, Fertilizer, etc.	24	29	38	
Truck & Auto Expense	18	58	121	
Interest on Notes	59	54	45	
Director's Fees	14	9	0	
Oil & Gas	203	145	52	
Taxes	39	40	41	
Insurance	23	28	35	
Total Cash Expenses	991	1,029	1,089	
Non-Cash Expenses				
Depreciation				
Bldg., Fence, Tile	$ 90	$ 73	$ 46	
Machinery & Equipment	43	45	48	
Total Depreciation	133	118	94	
Unpaid Opr. & Fam. Labor	305	280	239	
Interest Not Charged	29	28	27	
Total Non-Cash Expenses	467	426	360	
TOTAL EXPENSES	1,458	1,455	1,449	
MANAGEMENT INCOME AND PROFIT	-192	-171	-137	
NET FIRM INCOME	142	137	129	
VALUE OF PRODUCTION-CASH EXPENSES	275	255	223	
Total Investment	1,472	1,367	1,199	
Return to Investment	-104	-89	-65	
Profit Margin	-8.0%	-7.0%	-5.0%	
Turnover	.85	.94	1.09	
Return on Investment	-7.1%	-6.5%	-5.4%	
TOTAL UNPAID LABOR AND MANAGEMENT INCOME				
Total	113	109	102	
Per Hour	$2.62	$2.29	$1.75	

* Includes labor and supplies for packing or estimated packing house charges. Estimated charges are not included in data below, however.

Table 8: FINANCIAL SUMMARY PER 1,000 BASKETS OF GREENHOUSE TOMATOES, OHIO, 1971

Per 1,000 Basket Information (The following information is given per 1,000 baskets)	Upper 5	Average	Lower 4	My Greenhouse
	Per 1,000 Baskets			
Baskets Produced	1,000	1,000	1,000	
VALUE OF PRODUCTION	$2,282	$2,338	$2,461	
Cash Expenses				
Farm Supplies	$ 133	$ 151	$ 193	
Machine Repairs	11	13	16	
Build, Fence, Etc.	75	83	101	
Hired Labor	463	529	679	
Utilities	58	55	48	
Coal	16	88	248	
Misc. Expense	49	45	36	
Seeds, Plants, Fertilizer, etc.	35	41	55	
Truck & Auto Expense	30	85	209	
Interest on Notes	104	95	77	
Director's Fees	21	14	0	
Oil & Gas	338	283	165	
Taxes	64	67	75	
Insurance	36	44	63	
Total Cash Expenses	1,431	1,593	1,965	
Non-Cash Expenses				
Depreciation				
Bldg., Fence, Tile	$ 155	$ 132	$ 83	
Machinery & Equipment	69	73	85	
Total Depreciation	223	205	168	
Unpaid Opr. & Fam. Labor	358	367	388	
Interest Not Charged	43	44	48	
Total Non-Cash Expenses	624	616	604	
TOTAL EXPENSES	2,055	2,209	2,569	
MANAGEMENT INCOME AND PROFIT	227	129	-108	
NET FIRM INCOME	635	539	328	
VALUE OF PRODUCTION-CASH EXPENSES	851	745	496	
Total Investment	2,438	2,328	2,083	
Return to Investment	380	268	17	
Profit Margin	16.6%	11.4%	0.6%	
Turnover	.94	1.00	1.81	
Return on Investment	15.5%	11.5%	0.8%	
TOTAL UNPAID LABOR AND MANAGEMENT INCOME				
Total	592	495	280	
Per Hour	$2.21	$1.60	$0.68	

Table 9: FINANCIAL SUMMARY PER 1,000 BASKETS OF SPRING CROP GREENHOUSE TOMATOES, OHIO, 1971

Per 1,000 Basket Information (The following information is given per 1,000 baskets)	Upper 5	Average	Lower 4	My Greenhouse
	Per 1,000 Baskets			
Baskets Produced	1,000	1,000	1,000	
VALUE OF PRODUCTION	$2,349	$2,407	$2,537	
Cash Expenses				
Hired Labor	$ 383	$ 454	$ 615	
Farm Supplies	133	155	207	
Machine Repair	11	13	17	
Build, Fence, Etc.	75	82	97	
Utilities	57	54	47	
Coal	18	104	300	
Misc. Expense	49	45	37	
Seed, Plants, Fertilizer, etc.	35	40	50	
Truck & Auto Expense	30	83	207	
Interest on Notes	104	95	76	
Director's Fees	21	15	0	
Oil & Gas	341	296	199	
Taxes	64	68	77	
Insurance	36	45	64	
Total Cash Expenses	1,353	1,544	1,993	
Non-Cash Expenses				
Depreciation				
Bldg., Fence, Tile	$ 155	$ 132	$ 83	
Machinery & Equipment	60	68	85	
Total Depreciation	215	200	168	
Unpaid Opr. & Fam. Labor	317	333	374	
Interest Not Charged	43	45	49	
Total Non-Cash Expenses	258	245	217	
TOTAL EXPENSES	1,928	2,122	2,584	
MANAGEMENT INCOME AND PROFIT	42	285	-47	
NET FIRM INCOME	785	659	376	
VALUE OF PRODUCTION-CASH EXPENSES	996	863	544	
Total Investment	2,438	2,327	2,076	
Return to Investment	573	423	77	
Profit Margin	24.3%	17.5%	3.0%	
Turnover	.97	1.03	1.22	
Return on Investment	23.5%	18.1%	3.7%	
TOTAL UNPAID LABOR AND MANAGEMENT INCOME				
Total	742	614	327	
Per Hour	$11.79	$9.16	$3.21	

Table 10: FINANCIAL ANALYSIS PER 1,000 BASKETS OF FALL CROP GREENHOUSE TOMATOES, OHIO, 1971

Per 1,000 Basket Information (The following information is given per 1,000 baskets)	Upper 5	Average	Lower 4	My Greenhouse
	Per 1,000 Baskets			
Baskets Produced	1,000	1,000	1,000	
VALUE OF PRODUCTION	$2,025	$2,126	$2,296	
Cash Expenses				
Hired Labor	$ 685	$ 734	$ 818	
Farm Supplies	134	145	163	
Machine Repairs	11	12	13	
Build, Fence, Etc.	77	88	107	
Utilities	62	58	50	
Coal	9	56	136	
Misc. Expense	49	44	35	
Seeds, Plants, Fertilizer, etc.	36	48	68	
Truck & Auto Expense	31	98	211	
Interest on Notes	93	87	78	
Director's Fees	21	13	0	
Oil & Gas	333	242	91	
Taxes	64	67	72	
Insurance	37	46	62	
Total Cash Expenses	1,642	1,740	1,906	
Non-Cash Expenses				
Depreciation				
Bldg., Fence, Tile	$ 161	$ 132	$ 82	
Machinery & Equipment	70	75	83	
Total Depreciation	231	207	165	
Unpaid Opr. & Fam. Labor	497	468	419	
Interest Not Charged	43	44	47	
Total Non-Cash Expenses	771	719	631	
TOTAL EXPENSES	2,413	2,459	2,537	
MANAGEMENT INCOME AND PROFIT	-388	-333	-241	
NET FIRM INCOME	151	178	225	
VALUE OF PRODUCTION-CASH EXPENSES	383	386	390	
Total Investment	2,443	2,315	2,099	
Return to Investment	-242	-195	-116	
Profit Margin	-11.9%	-9.1%	-5.0%	
Turnover	.85	.92	1.09	
Return on Investment	-9.9%	-8.4%	-5.5%	
TOTAL UNPAID LABOR AND MANAGEMENT INCOME				
Total	108	134	178	
Per Hour	$2.62	$2.30	$1.75	

How Well Did Your Operation Perform?

Throughout this report, space has been provided to enter figures for your own operation to compare with those from the nine firms summarized. In Table 11 are key performance factors taken from various parts of the summary. By entering data for your firm into this table you can begin to answer three basic questions about your performance:

Am I fully employed?

How well did my tomatoes perform?

How sound is my operation financially?

If your figures are low in some cases and high in others, you may need to concentrate on these weak areas to improve your profit picture. No one factor can be singled out as the basic difference between high and low income firms. For each efficiency measure, some firms in the lower group ranked near the top. But SATISFACTORY INCOMES were the result of above average performance "Across the Board," rather than outstanding achievement in only one or two departments.

Table 11: BASIC CHECKLIST FOR COMPARISON OF YOUR OPERATION WITH NINE OHIO GREENHOUSE TOMATO OPERATIONS, 1971

	Upper 5	Average	Lower 4	My Firm
Am I Fully Employed?				
1. Acres of Tomatoes	2.7	2.4	2.1	
2. Acres Per Man	.412	.408	.418	
3. Baskets Per Man	11,180	9,700	7,650	
How Well Did My Tomatoes Perform?				
4. Baskets Per Acre - Spring	21,010	17,780	12,610	
5. Baskets Per Acre - Fall	6,150	5,980	5,700	
6. Baskets Per Acre - Total	27,160	23,760	18,300	
7. Gross Income Per Acre	62,085	56,160	44,632	
8. Net Firm Income Per Acre	18,168	13,681	5,980	
9. Overhead Cost Per Acre	13,791	12,355	9,606	
10. Variable Cost Per Acre	31,416	31,261	29,895	
11. Labor & Management Income Per Acre	16,877	12,544	5,132	
12. Investment Per Acre	59,874	51,961	37,388	
13. Return to Investment Per Acre	11,012	6,971	228	
14. Labor Used Per Acre (Hours)	7,290	7,350	7,530	
How Sound Is My Operation Financially?				
15. Value Per Basket Sold[1/]	2.68	2.63	2.53	
16. Cost Per Basket Sold	2.09	2.13	2.26	
17. Gross Income Per Man	25,550	22,920	18,630	
18. Overhead Costs As A % of Gross	22.2%	22.0%	21.5%	
19. Profit Margin	17.7%	12.4%	0.5%	
20. Turnover	1.04	1.08	1.19	
21. Return to Investment	18.4%	13.4%	0.6%	

1/ Includes estimates for packing house charges.

GLOSSARY OF SELECTED TERMS*

GROSS INCOME - is the sum of all cash receipts plus inventory and capital gains less decreases in inventory and capital losses.

INTEREST NOT CHARGED - represents an estimated charge for equity capital. It is determined by taking six percent of total investment and subtracting the amount of interest paid during the year. This calculation makes a similar charge for the total investment of each farm business.

UNPAID OPERATOR & FAMILY LABOR - is the wage charge for the operator and unpaid family labor using the time worked and rates per hour estimated by the farm operator.

TOTAL EXPENSE - is the sum of all cash and non-cash expense for the firm less the cost of purchased feeder livestock. Non-cash expense includes depreciation, interest not charged and unpaid operator and family labor charge.

MANAGEMENT INCOME & PROFIT - equals Gross Income minus Total Expense. This represents the return to management income and profit after all cash and non-cash expenses are deducted.

FAMILY LABOR & MANAGEMENT INCOME - equals Management Income and Profit plus Unpaid Operator and Family Labor. This represents the return to the operator and his family for their unpaid labor, management and profit.

NET FIRM INCOME - equals Family Labor and Management Income plus Interest Not Charged. This represents the return to the operator for equity capital, unpaid labor, management and profit.

RETURN TO INVESTMENT - equals Management Income and Profit plus paid and unpaid interest. Paid and unpaid interest equals six percent of Total Investment. This represents the return to all capital, owned and borrowed, plus management and profit. This return times 100 divided by Total Investment gives Percent Return On Investment.

OVERHEAD COSTS - is the sum of depreciation, building repairs, interest paid, property taxes, cash rent, insurance and interest not charged. These represent costs that are essentially fixed and must be recovered regardless of the level of production.

VARIABLE COSTS - is the sum of all cash expenses other than those included in Overhead Costs. These costs vary with the level of production.

NUMBER OF MAN-YEAR EQUIVALENTS - represents the number of full-time man equivalents available on the farm for the entire year. Family labor is adjusted to a man-equivalent basis. One man-year equivalent is 3,000 hours.

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* A complete listing of calculations is contained in occasional paper #49, "A Guide To Interpretation of the Computer Printout."

PROFIT MARGIN - equals Management Income and Profit plus paid and unpaid interest divided by gross income times 100. This shows the dollars of profit and interest received from each dollar of gross income.

TURNOVER RATIO - equals Gross Income divided by Total Investment. This is the dollars of gross income received during the year for each dollar of investment.

RETURN ON INVESTMENT - equals Management Income and Profit plus paid and unpaid interest divided by Total Investment times 100. It gives the percent of profit and interest received during the year for each dollar of investment.